DOCUMENT RESUME

ED 231 447 JC 830 291

TITLE	The Community College General Academic Assessment.
INSTITUTION	Center for the Study of Community Colleges, Los Angeles, Calif.
PUB DATE	[83]
NOTE	14p.
PUB TYPE	Reports - Descriptive (141) -- Statistical Data (110)
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	Community Colleges; *Educational Assessment; *Knowledge Level; *Liberal Arts; *Measures (Individuals); Outcomes of Education; *Questionnaires; Research Utilization; *Student Characteristics; Surveys; Two Year Colleges; Two Year College Students
IDENTIFIERS	*General Academic Assessment

ABSTRACT

The General Academic Assessment (GAA), an instrument designed to measure students' knowledge of the liberal arts, was developed by the Center for the Study of Community Colleges for use by community colleges to informing decisions about curriculum modifications and estimating institutional outcomes. The instrument, which includes 29 demographic and student experience items, 57 items in humanities, 60 in English usage, 53 in math, 59 in science, and 71 in social science, was constructed for administration to students in academic-transfer courses during a single class period. The GAA was administered in a 1983 pilot study to 1,276 students in 63 classes at three community colleges in California and two in Kansas. Preliminary findings indicated that: (1) 60% of the sample were attending college to prepare for a transfer to a four-year college; (2) the primary reason given for selecting a particular transfer institution was the availability of a program of interest; (3) 64% had received advice from a faculty member concerning course selection; (4) over 20% felt they could benefit from academic support services, but had no time for them; (5) the more semester hours the students had completed, the higher their scores on the GAA; (6) the greater the number of liberal arts courses taken, the higher the total GAA score; and (7) students attending college to satisfy a personal interest scored highest on the GAA. (HB)

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ED231447

THE COMMUNITY COLLEGE GENERAL ACADEMIC ASSESSMENT

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THE COMMUNITY COLLEGE GENERAL ACADEMIC ASSESSMENT

Since 1974 the Center for the Study of Community Colleges has been tracing trends in the liberal arts and transfer education by surveying students, faculty, curriculum, and instructional practices. The Center staff has conducted national studies of faculty, curriculum and instruction; surveyed regional cohorts of students; visited numerous colleges; sponsored workshops to bring people together to share ideas; and disseminated information through papers, conference speeches, and publications.

The various surveys and intensive studies yielded information on course requirements, student and faculty attitudes and demography, instructional practices, curricular sequences, and reasons for the rise and fall of the liberal arts and general education. But a complete picture could not yet be drawn. How much were the students learning? What did they know about science, social science, and the humanities? The extent of student knowledge -- the purpose of the enterprise -- was still unclear.

There seemed a need for a way of assessing students' knowledge of the liberal arts -- not course-specific knowledge, not knowledge for the purpose of placing students in courses, diagnosing their weaknesses, or comparing them with their fellows. The need was for a procedure to gain information that could be used in program planning and in apprising staff, clients, and constituents of the learning manifested by students who had taken liberal arts and general education courses in community colleges.

Accordingly, the Center staff developed and field-tested a student survey and general academic assessment that yields information about student knowledge in general education and the liberal arts. This General Academic Assessment (GAA) has representative numbers of items in the humanities, sciences, social sciences, mathematics, and English usage. In addition, it contains such background items about the students as age, the number of college credits earned, educational and occupational aspirations, self-assessment of their skills, use of support services, and the number of liberal-arts courses taken.

The GAA was designed for use in community colleges. It assesses learning of cohorts of students, not the learning of individual students enrolled in certain classes. It will not be administered to students in universities nor will its results be compared with scores made on other assessments. It is for use in community colleges by community college educators as an aid to informing decisions about curricular modifications and estimating institutional outcomes.

The GAA will enable educators to make certain general statements about students' knowledge in academic areas that the college curriculum is designed to promote. It will enable them to answer the following types of questions:

What is the difference in knowledge manifested by students who have completed less than 15 credit hours as compared with those who have completed more than 45 hours?

What do students who have taken two or more science courses know in the sciences compared to those students who have not taken a science course? (Similar questions can be asked with respect to the humanities, social sciences, and mathematics.)

Do students who have taken a prescribed sequence of core general education courses know more about the liberal arts than those who have fulfilled graduation requirements through completing a distribution of courses?

What are the differences in knowledge among students aspiring to careers in the professions, allied health, applied arts, business operations, management and sales, social service, technologies, or trades and crafts?

What percentage of students whose scores in mathematics are below average receive assistance for their math skills?

Does knowledge of the liberal arts held by entering students change from year to year?

PRELIMINARY FINDINGS

In spring 1983, the GAA was administered in a trial run to 1276 students in 63 academic transfer-credit classes in three colleges in California and two in Kansas. Highlights of this pilot administration indicate that:

The highest scoring students (top quartile) tended to:

Anticipate receiving the Associate Degree within a year;

Be enrolled to prepare for transfer to a four-year college or university;

Have completed 30 or more hours of college credit;

Have completed seven or more liberal arts courses;

Rate their knowledge of the humanities, mathematics, sciences, social sciences, and basic literacy as "good" or "excellent;"

Not seek extra academic assistance because they did not feel they needed the help;

Desire a career in a profession in which an advanced degree is required (e.g., engineering, law, accounting, medical doctor);

The lowest scoring students (bottom quartile) tended to:

Not hold the Associate Degree and not anticipate receiving it within a year;

Be enrolled in college to gain skills necessary to prepare for or advance in a particular occupation;

Be 18 to 22 years old;

Have completed less than 30 hours of college credit;

Have completed fewer than seven liberal arts courses;

Rate their knowledge of the humanities, mathematics, sciences, social sciences, and basic literacy as "fair" or "poor";

Desire a career in the allied health fields more than in any other occupational career;

A more detailed report of the findings begins on page 6.

SPECIFICATIONS

Source of Items

The questions in the demographic portion of the GAA were gleaned from questions that proved useful in the Center's 1980 and 1981 surveys of more than 12,000 students in Washington State and Los Angeles. Many of the questions on students' self-ratings of their academic abilities were extrapolated from the concepts defined by the groups working on Skills for Living in Dallas, associate degree and general education requirements in Los Angeles, the Arts and Sciences in the Maricopa District, and the Core Curriculum Approach to General Education in Miami.

Items for the content portion were drawn from several sources. The National Assessment of Educational Progress provided numerous usable items in science, social science, and mathematics. Educational Testing Service made items in the humanities and social sciences available on loan for purposes of this project. The City Colleges of Chicago provided items in English usage. And Miami-Dade provided items in the humanities. Center staff members culled the items with the help of instructors and counselors from several California community colleges. Final selection was made by panels of staff members from colleges in Chicago, Dallas, Los Angeles, Miami, Phoenix, and St. Louis.

The current survey forms include 29 demographic and student experience questions and 57 items in humanities, 60 in English usage, 53 in mathematics, 59 in science, and 71 in social science.

Sampling

The survey is designed for administration to students who are enrolled in academic transfer-credit courses. Students who are taking only remedial classes, vocational-technical classes, and/or adult education classes that do not carry transfer credit are not part of the population base. However, students taking classes in those categories and, in addition, taking a class for academic transfer credit, are properly part of the population. The class section is being used as the unit of sampling because it is the most feasible way of administering a survey to the population described.

Administration

The survey is subdivided into five forms with each form taking approximately 50 minutes to complete. Students in each selected class will be given one of the five forms on a random basis. Thus, the students can complete the assessment during one class period.

The administration and scoring procedures for the GAA are such that information is gained about cohorts of students, not about individuals. Specifically:

five equivalent forms are distributed at random to students to complete within a fifty-minute class period;

each form includes items in humanities, science, social science, mathematics, and English usage;

separate scores are tallied for each of the five areas.

USES

Survey results and data analyses can be used in a variety of ways. The information gained can inform policy decisions regarding curriculum patterns and course and graduation requirements. Changes in student abilities and demographics over time can be traced. Various questions can be answered, such as; How much does this year's cohort of entering students know in the sciences as compared with last year's group? How much more do students who have taken a course in humanities know? How have student aspirations changed? Do students who have completed one or two years of college rate their academic abilities higher than those who are just entering? Do students who intend transferring score higher on various content areas than students who are preparing for careers that do not require bachelors' degrees? What percentage of the students whose scores are below average on mathematics or English usage receive assistance in those areas? What is the relationship between students' career aspirations and their scores? How does the cohort of part-time students differ from the full-time students?

The preparation and trial of the Student Survey and General Academic Assessment has resulted in an instrument designed for use in community college. The procedures are such that the instrument can be readily administered and easily scored. Demographic questions can be designed by participating colleges. The instrument will be available for use by all community college educators who are concerned with cross-sectional data on various cohorts of their students.

RESULTS OF THE SPRING, 1983, ADMINISTRATION

Characteristics of Sample (N=1276)

Sixty percent of the students were attending college to prepare for transfer to a four-year college or university. One in ten held an Associate Degree or higher. Just under one-half anticipated receiving an Associate Degree by June, 1984.

Reason for Attending College

To prepare for transfer to a four-year college or university	60%
To gain skills necessary to enter a specific occupation	23%
To gain skills necessary to advance in a current occupation	10%
To satisfy a personal interest	7%

Degree to be Completed By June 1984

AA	49%
BA/BS	8%
Professional or Graduate School	4%
None	40%

Degree Currently Held

AA	5%
BA/BS	3%
Professional or graduate degree	2%
None	90%

Primary Reason for Selecting a Particular Transfer Institution

The major factor that would influence students' choices in attending a particular transfer institution was that "it offers a program in my major area of interest." Academic reputation of college was second. Together these factors were identified by over 70 percent of the students as the primary reasons that would influence their decision to transfer to a particular four-year college or university. Only 13 percent of the students checked "availability of financial assistance" or "low tuition" as the most important determinant in selecting a transfer institution.

Reasons That Would
Influence the Decision To Attend A
Particular Four-Year College Or University
(N=1,276)

Availability of education programs in my area of interest	49%
Academic Reputation of college	22%
The college is located close to my home	13%
Availability of financial assistance	8%
Low tuition	5%
The college encourages attendance on a part-time basis	3%

Assistance Received From Faculty and Counselors

About two-thirds of the students received advice from a faculty member concerning course selection. Over one-third met with a faculty member to discuss issues related to transfer, career choice and/or study skills.

More than one in five students felt that they could have benefited from having faculty advice regarding transfer, career choice, and study skills but that they lacked the necessary time to receive such advice. Similar results were found with respect to seeking advice from counselors.

Percentage of Students Who Received Assistance from Faculty Members and Counselors (N=1,276)

	Have Received This Service	Do Not Need Service	Could Benefit From Service But Have No Time for It
Advice from a faculty member on:			
Course selection	64%	20%	16%
Transfer to another college or university	43%	33%	24%
Career choice	35%	44%	21%
Study or test-taking skills	34%	32%	34%
Advice from a counselor on:			
Course selection	68%	17%	16%
Transfer to another college or university	48%	29%	22%
Career choice	31%	46%	24%
Study or test-taking skills	17%	44%	38%

Student Use of Academic Support Services

Over 20 percent of the students thought that they could benefit from but had no time for extra assistance (remedial courses, tutoring, laboratory work) in reading, writing, mathematics, or study skills. This number was much greater than the number who took advantage of the services.

Students who said they could benefit from a particular academic support but had no time for it had substantially lower scores on a related section of the GAA than those who felt that they did not need the extra help (e.g., extra help in math and score on the mathematics scale).

Specific Services Used by Students
and Reasons for Not Using Services
(N=1,276)

Remedial courses, tutoring or laboratory work in:	Used Service	Do not Need Service	Could Benefit From Service But Have No Time for It
Reading	12	67	21
Writing	18	56	26
Mathematics	22	50	28
Study or Test-Taking Skills	14	50	36

Students Ratings of Skills

Students' self-ratings of their skills in a particular area (e.g., humanities) was a good indicator of their scores on the related area of the GAA (humanities scale). For example, students who rated their skills in science as good or excellent scored significantly higher on the science scale than did those who rated their skills in science as fair or poor.

Student Self-Ratings of Skills
And Scores on Related Areas of the GAA
(N=1,276)

Self-Ratings	Humanities	Literacy	Math	Science	Social Science
Poor	15	49	26	30	37
Fair	16	53	27	33	37
Good	18	56	30	36	40
Excellent	23	61	31	42	41
Total No. of Items (Top score possible)	57	96	53	59	71

Relationship Between Number of Semester Hours Completed and Students' Knowledge

The greater the number of college semester hours completed, the higher the score on the GAA. Students who completed over 60 credit hours scored higher than students with 31 to 60 units (193 vs. 179); students who had completed 31 to 60 units scored higher than those who had earned 1 to 15 credits (176 vs. 164); and those who had accumulated 1 to 15 credits know more than students who had yet to complete a college course (164 vs. 149).

Number of College Credit
Hours Completed and Scores on the GAA
(N=1,276)

Semester Hours Completed	Humanities	Literacy	Math	Science	Social Science	Total Liberal Arts
0	15	45	24	28	35	149
1-15	16	52	26	31	36	164
16-30	19	56	28	32	39	176
31-60	18	57	29	32	40	179
61 and Over	21	61	31	37	42	193
Total No. of Items (Top score possible)	57	96	53	59	71	336

The greater the number of liberal arts courses completed, the higher the score on the total assessment. Overall scores on the GAA ranged from a high of 190 for students who had taken 13 or more liberal arts courses to 150 for those who had not completed a course in the liberal arts.

Number of Liberal Arts Courses Completed
and GAA Scores
(N=1,276)

Liberal Arts Courses Completed	0	1-3	4-6	7-9	10-12	13+	No. of Items
Score on GAA	150	163	171	177	185	190	336

Relationship Between Courses Taken and Students' Knowledge

What students know is related to what they study and how much they have studied it. For example, the greater the number of college courses completed in the humanities, the higher the scores on the Humanities Section of the GAA. The same pattern of findings held with respect to mathematics, science, and the social science sections of the GAA.

Number of Courses Completed In
Subject and GAA Score on Related Area
(N=1,276)

Number of Courses Completed In Subject Area	Humanities	Literacy	Math	Science	Social Science
0	15	52	26	33	35
1	17	56	27	36	36
2	18	58	30	36	41
3 or more	22	57	34	38	43
Total No. of Items	57	96	53	59	71

Students' Educational Objectives and Scores On the GAA

Students attending college to satisfy a personal interest scored the highest on the GAA (181). They were followed closely by those attending college to prepare for transfer to a four-year institution (177) and those seeking to gain skills necessary to advance in a current occupation (173). Significantly lower scores on the GAA were found among students whose primary goal for attending college was to gain skills necessary to enter a specific occupation (166).

Primary Reason for Attending College and Scores On the GAA (N=1,276)

Reason for Attending College	Humanities	Literacy	Math	Science	Social Science	Liberal Arts
To satisfy a personal interest	22	56	26	36	41	181
To prepare for transfer to a four-year college or university	18	56	29	35	39	177
To gain skills necessary to advance in a current occupation	18	54	27	35	39	173
To gain skills necessary to enter a specific occupation	17	53	25	34	37	166

Students' Career Aspirations and Scores On the GAA

Among students who had completed 30 or more credit hours, the highest scorers were those who were preparing for a profession in which an advanced degree was required; the lowest scorers were those preparing for a career in the technologies or trades.

Students preparing for a career in which an advanced degree was required had the highest scores on the Literacy and Mathematics sections of the GAA and were tied with students desiring a career in the technologies/trades for top honors in Science. The highest scores on the Humanities Scale were obtained by those preparing for a career in the applied arts, while students preparing to enter an allied health profession scored the highest on the Social Science Scale.

Career Aspirations and GAA Scores
for Students Who Had
Completed 30 or More College Credits
(N=616)

	Humanities	Literacy	Math	Science	Social Science	Total Liberal Arts
Advanced Degree Professions	20	60	35	38	39	192
Allied Health	20	59	27	35	43	184
Applied Arts	21	56	25	37	41	180
Business	18	55	29	35	41	178
Social Science	17	58	27	34	41	177
Technologies-Trades	17	54	27	38	37	173

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JUL 22 1983